

WINDCUBE®

VERTICAL PROFILER

LIDAR FOR RESOURCE ASSESSMENT AND POWER PERFORMANCE TESTING

Main Applications:

Resource Assessment

Onshore + Offshore

Power Performance Testing

WINDCUBE

TransAlta installation,
Alberta, Canada



NRGSystems™

REDUCE UNCERTAINTY AND INCREASE PROFITABILITY

With over 650 units in operation globally, Windcube is recognized for best-in-class performance for both wind resource assessment and operational wind plant performance monitoring. NRG Systems pairs this industry-leading technology with unrivaled technical support and services to create the best customer experience at all stages of project development.



FEATURES AND BENEFITS

- Proven remote sensing technology offering superior measurement quality
- Unrivaled ease-of-use
- Ideal for tight clearings and forested areas
- Suitable for a variety of climates, terrains, and applications
- Bankable measurements with similar uncertainty to a met mast in simple terrain
- Stage 3 status in DNV GL's remote sensor stages of acceptance, meaning stand-alone use with limited, if any, on-site verification required
- Valid for use in contractual power performance testing per IEC 61400-12-1:2017



ADVANCED FEATURES



BGAN M2M Satellite Communications Kit

Connects your Windcube to the internet through Inmarsat's global satellite network, delivering measurement data anywhere in the world, even when cellular service is not readily available.

Flow Complexity Recognition®

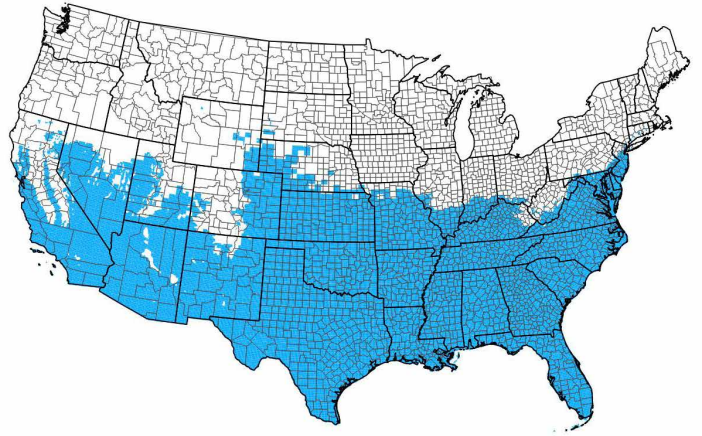
Available as an integrated upgrade, allowing for direct and accurate wind speed measurements in complex terrain without post-processing or post-correction.

LEGENDARY SERVICES AND SUPPORT

- We offer lifetime technical support, including classroom and field trainings as well as Lidar deployment and relocation services from our USA headquarters.
- Optional continuous operations contracts are available to all Windcube customers, providing guaranteed uptime and data continuity on critical measurement campaigns.
- Our Lidar-to-Lidar validation service ensures measurement traceability.
- Our inspection and update service includes an examination of major Windcube components, updates to the latest software and hardware, and a final system check against a reference unit to confirm normal operation.
- Extended warranties are available in one- and two-year increments.
- We offer flexible purchasing options, including monthly rentals and a pay-for-data plan.

Remote Power Solutions

Cost-effectively deliver power to your Windcube in hard-to-access and off-grid locations. NRG Systems offers a wide range of autonomous power solutions, including a PV-based power trailer purpose-built for Windcube installations in the lower latitudes of the United States. The trailer was designed to achieve 100% year-round uptime in the shaded regions shown in the accompanying image, and will also work in more northern latitudes outside of the winter months.



Winter Performance Kit

Optimizes performance in extreme cold and snow.



PERFORMANCE	
Range	40 to 200+ meters
Data Sampling Rate	1 Hz
Measuring Distances	12 user-defined distances, measured simultaneously
Horizontal Wind Speed Accuracy	0.1 m/s
Horizontal Wind Speed Uncertainty	2-3% (following IEC 61400-12-1:2017)
Speed Range	0 to +60 m/s
Direction Accuracy	2°
Beam Geometry	4 inclined beams at 28° + 1 vertical beam

OPERATIONS	
Dimensions	54 cm x 55 cm x 54 cm
Weight	45 Kg
Power Consumption	45W nominal
Temperature Range	-30°C to +45°C (-22°F to 108°F); to -40°C with Winter Performance Kit
Environment	Housing classification IP67 (inner racks) Marine atmosphere compliant (IEC 60068-2-52) Operating humidity 0 to 100% RH
Safety	Class 1M/EN 60825-1
Compliance	CE

DATA	
Output Data	1s/1, 2, 5, 10 min (user-defined) Horizontal and vertical wind speed Wind speed standard deviation Wind direction CNR (signal to noise) GPS coordinates Data availability
Data Storage	32 GB – over 5 years @ 1 Hz + 18 months backup storage
Data Format	ASCII (encoding), .STA/.RTD (file)
Communication Options	Ethernet (RJ45), 3G modem (included), CANBus + Peripheral (USB), BGAN Satellite modem
Time Synchronization	GPS, NTP

ABOUT NRG SYSTEMS

NRG Systems is the exclusive North American distributor of Windcube Lidar technology manufactured by Leosphere, a leading specialist in the development of Lidar for atmospheric observations. We believe that products should be easy to use, precise, and well-supported, with technical service that goes beyond troubleshooting. NRG Systems focuses on every step of the ownership process—from sales consultation and shipping logistics, to installation—to ensure the best possible customer experience.

ABOUT OUR BUSINESS PARTNER

Leosphere develops and manufactures turnkey remote sensors that provide real-time tracking, wind measurement, and aerosol characterization. Leosphere has deployed more than 750 Lidars throughout the world across various applications including wind energy, climatology, meteorology, and air quality.

For more information:

NRG Sales
+1 802.482.2255
sales@nrghsystems.com
nrghsystems.com
scanninglidar.com
ISO 9001: 2008 Certified

